

Optimizing Workflow with Technology and Design



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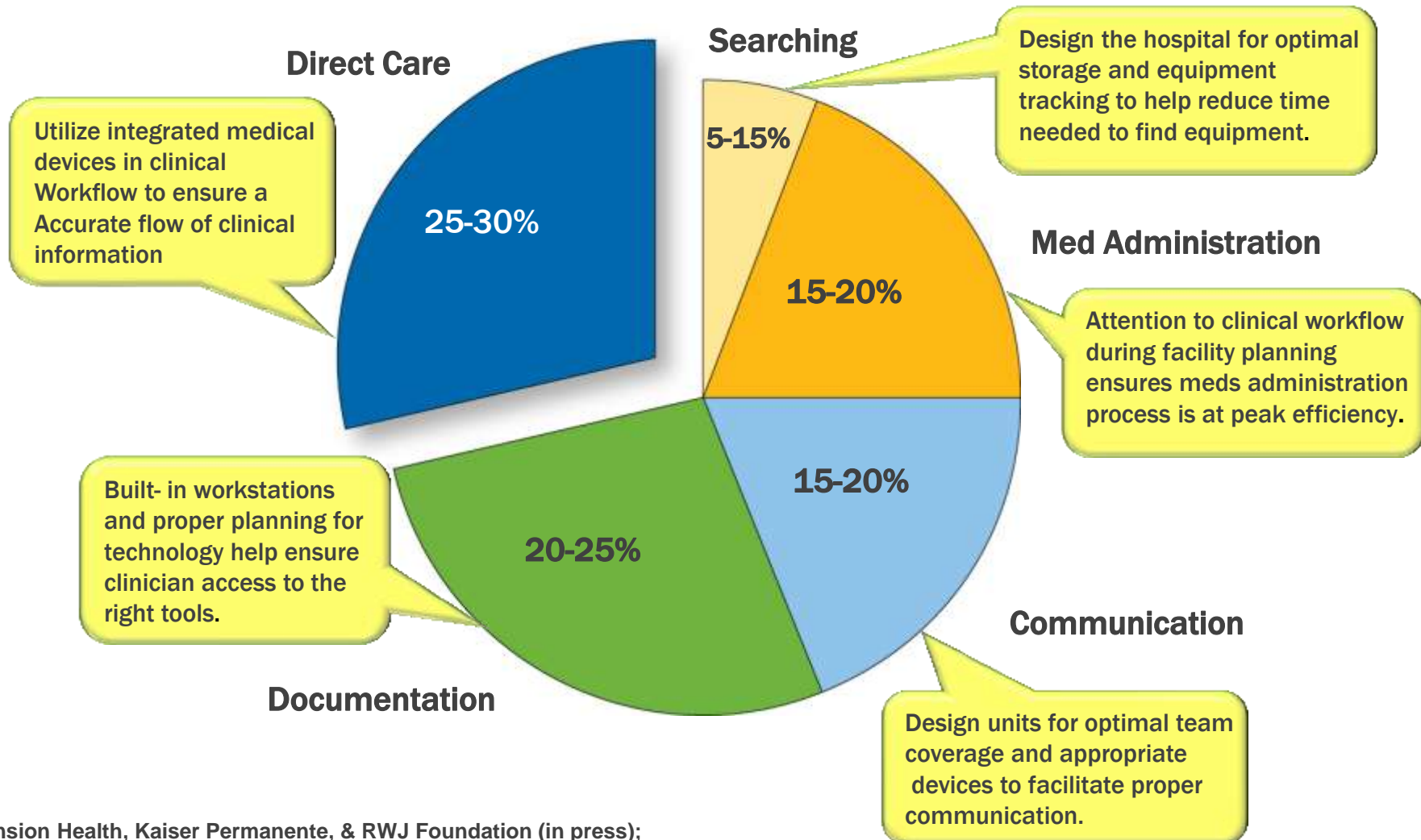


Objectives

- Describe automating and integrating medical devices into the clinical practice environment.
- Demonstrate how smart technologies can impact the workflow for clinicians and the overall experience for the patient.
- Explain strategies for designing the patient environment to improve patient outcomes and clinical workflow.

CLINICAL INEFFICIENCY

Caregivers spend only **25-30%** of their time delivering **direct care**



Connecting...



Devices Need Appropriate Knowledge

- Too Smart – Loaded with software and functionality that create duplicate work
- Too Dumb – Focused on performance of core device functions without the ability to interact and/or share data in proper patient context.

➞ ... people to devices



➞ ... devices to workflow



➞ ... workflow to outcomes



Cerner Smart Room – Integrated Solutions

The Cerner Smart Room combines innovative technologies, medical device interoperability and workflow solutions to improve patient care and clinician efficiency. The Smart Room incorporates key elements of the patient and clinician experience to streamline care. The objective of the Smart Room is to create an environment that:

- Connects medical devices to the EMR
- Allows caregivers to view relevant clinical data from the EMR and medical devices
- Empowers patients and their families by connecting them to their personal health record.

CareAware RoomLink

Electronic signage outside a patient room to communicate appropriate data to clinicians, including falls risk and allergies, as well as whether or not a clinician visit is in-progress.

CareAware RxStation

Delivers a unified closed loop medication solution, automating every step of the process from order and dispense to administration.

CareAware VitalsLink

Allows clinicians to take vitals, document verify and sign in under 60 seconds.

CareAware AlertLink

Improves patient outcomes by routing alerts to a clinician's mobile device.

CareAware EPS

A fully integrated, enterprise-wide positioning and real time location solution that delivers clinical integration and process improvement benefits.

CareAware iBus including Bed Connectivity

CareAware iBus™ is the core component of the CareAware architecture that manages two-way communication between devices and the EMR.

CareAware iAware

Provides clinicians a personalized view of all information relevant to patient care by enhancing communication and access to information.

CareAware myStation

Offers interactive health information, education and entertainment to improve the patient and family experience.

Cerner iAccess

Eliminates the need to manually enter user name and password on a PC. Uses presence detection and biometric authentication to log into PowerChart and other supported applications.

Outside of Patient Room



Electronic Room Signage

Patient Safety:

- Displays Room #
- Displays Room/Patient Information in real time. Ex. NPO, Latex Allergy, Isolation
- Integration with Nurse Call system



Room Availability:

- Red & green lights to show room Status
- Display caregiver currently in the room name and role.

Visitor Information:

- Integration to display messages to visitors Ex. Do not Disturb.



Television in patient room



Patient Entertainment, Education, Communication . . .

HOSPITAL NAME



Jamie Jordan
2 East, Room 2145
myPhone:
323-201-1020

Movies Music Games Internet Help

Fri. Jul. 31, 2009 15:14

myTV



1

Health Notes



2

myHealth System



3

myCare Team



4

myChart



5

myEducation



6

myOpinion



7

myMeals



8

Parental Controls



9

myGoals

Want to go home for...

Want to feel better soon

myTo Do's

View patient education...

Work with nutritionist...

mySchedule

5:00 AM Appt with Health...

10:30AM Appt with Health...

1:30 PM Appt with nutritionist

2:00 PM Appt with nutritionist

3:00 PM Appt with Home...

3:30 PM Appt with Home...

Introduction Video

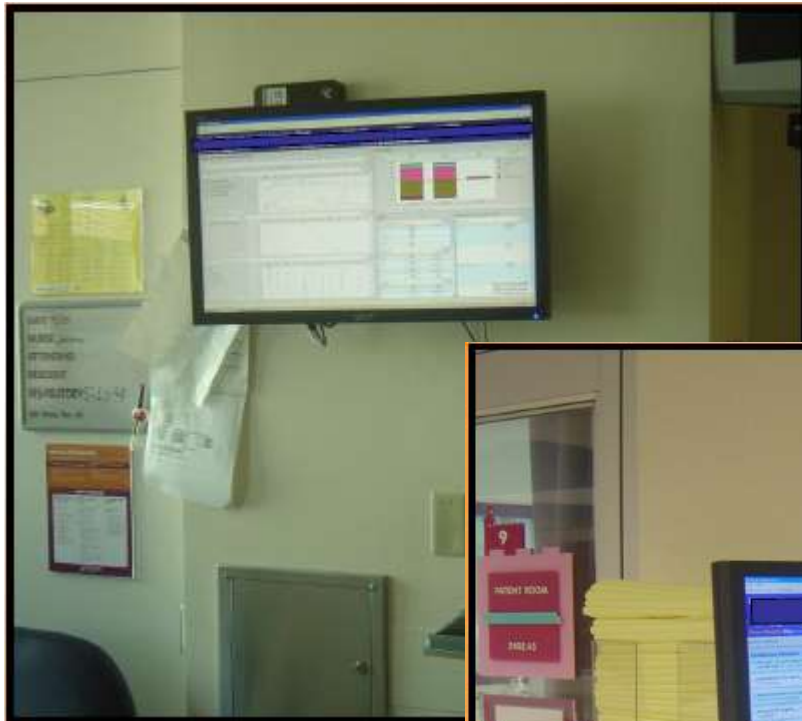
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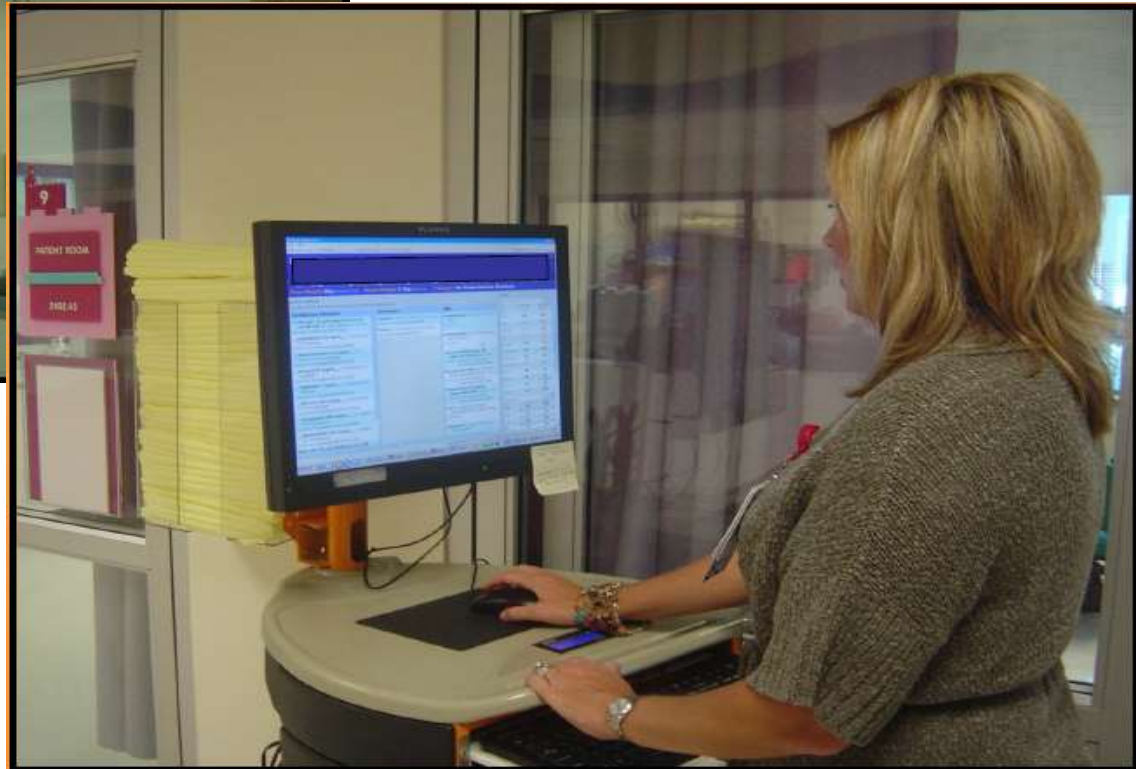
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Patient Data Display in Critical Care



- Fixed monitor
- mobile cart



Patient Data Display in Critical Care



RTLS Technology for Tracking

- **Command and Control** your operations with real time data on the position and status of patients, staff, and equipment by integrating real-time location services (RTLS) and clinical data.

CareAware Capacity Management

File Launch Personalization Help

Tracking Bed Board Patient Placement Transport Custodial Services

Reset Perspective 0 minutes ago

Baseline West Baseline West Clinics Baseline West Family Practice

Floor Plan

Display Controls

Alerts

Alerts	Name	Assigned Location	Current Location	Age	Reason For Visit/Diagnosis	LOS	Gender	Badge ID	Registration Time	FI
	Rhodes, Charlie	Baseline West F...	Lobby	81 years	Pain Management	55 19:08	Male	5554	6/25/11 3:06 PM	
	Lopez, Jeremy	Baseline West F...	Exam Room 1	67 years	New Diagnosis	55 04:11	Male	5678	5/5/11 6:19 PM	
	Jewel, Scott	Baseline West F...	Exam Room 2	70 years	Chemotherapy	55 19:12	Male	5557	6/25/11 3:13 PM	
	Thomas, Michael	Baseline West F...	HW Exam 4	68 years	Consult	04 07:06	Male	4567		
	Walters, Chantell	Baseline West F...	Inj/Draw Rm	40 years	Follow-up	04 07:04	Female	2134		
	Malinago, Rita	Baseline West F...	Exam Room 3	69 years	New Patient Chemotherapy	55 19:11	Female	5556		
	Dinkle, Ann	Baseline West F...	Inj/Draw Rm	63 years	Chemotherapy	55 19:04	Female	5551		
	Gordon, Brenda	Baseline West F...	Heme Treatment	69 years	Follow-up	55 19:09	Female	1234	6/25/11 3:18 PM	
	Wittman, Albert	Baseline West F...	Infusion Treatment	65 years	Oncology	04 07:26	Male	8787	6/25/11 3:01 PM	

System Time: 6/29/2011 17:29 CDT User: junitus@surround.northamerica.cerner.net Domain: surround.northamerica.cerner.net

Is Your Facility Designed for the Future?



Increase satisfaction and supports optimal patient care

- Does your design support your planned care delivery structure?
- Are your rooms built with a patient-centric design?
- Are your units designed for caregiver efficiency and satisfaction?
- Are nurses able to document at the point of care?

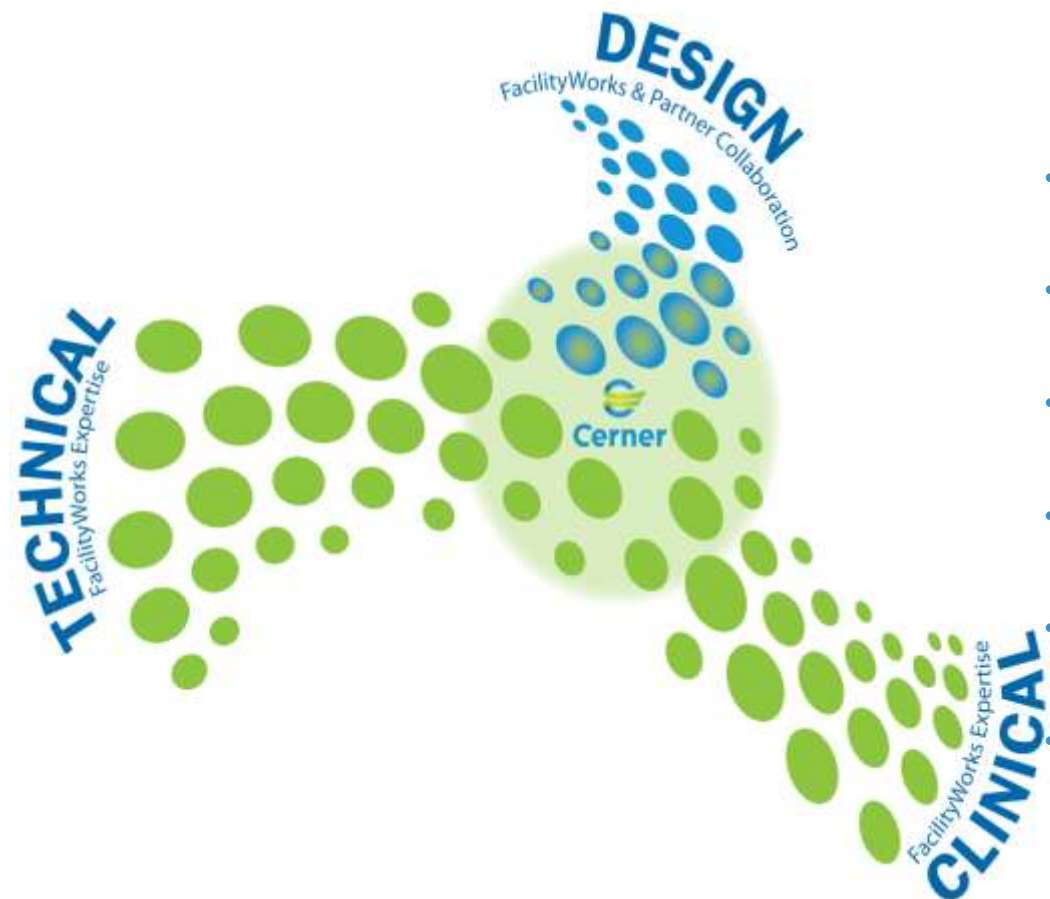


Enable your infrastructure for future innovation and flexibility

- Do you have a network infrastructure ready to handle integrated smart solutions and their respective data flow?
- Do you have enough power to run your envisioned device roadmap?
- Can you change out the acuity of a room easily?
- Can you expand and contract in reaction to patient census?
- Are you designed as to minimize change and refit needs?

FacilityWorks

Consulting services focused on alignment of clinical, technical and architectural strategies to drive efficiencies and optimize care outcomes through facility design.



Key Benefits:

- **Blend of design, technical and clinical expertise**
- **Capitalizing on 30 years of healthcare experience**
- **Deep technical understanding and abilities**
- **History of strong collaboration with industry leading partners**
- **Strong commitment to Innovations and R&D**
- **Agnostic perspective focused on optimizing clinical outcomes**

Principles for Facility Design and Workflow

✓ REDUCE

- Costs due to facility re-design and re-construction
- Patient stays due to optimal healing environment
- Traffic in patient room
- Energy costs from design efficiencies
- Negative environmental impacts

✓ INCREASE

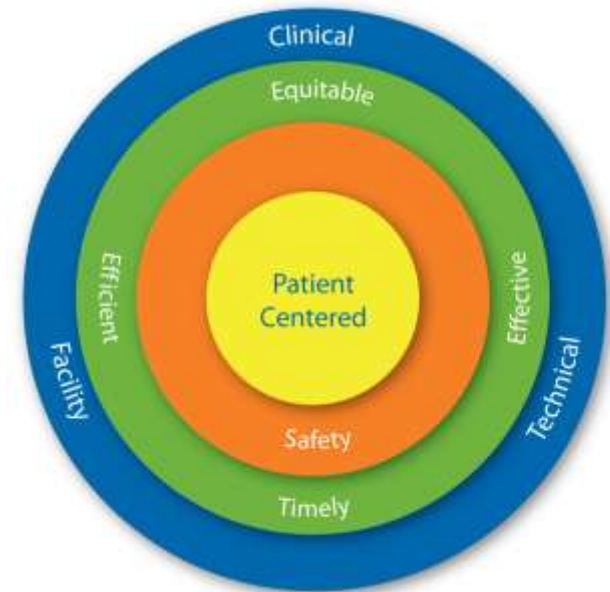
- Staff efficiencies
- Provider, patient and family satisfaction
- Patient Safety

✓ OPTIMIZE

- The care environment
- Apply evidence based clinical design to achieve optimal patient outcomes
- The Ideal workspace for the care provider
- Technologies to increase visibility and access to patient data

✓ OUTCOMES

- Define the vision for clinical best practices
- Realize desired clinical outcomes for the now and future
- Focus on clinical transformation
- Building on the vision for the future



Healthcare Outcomes	Evidence Based Design Strategies or Environmental Interventions										
	Single Bed Rooms	Access to Daylight	Appropriate Lighting	Views of Nature	Family Zone in Patient Room	Carpeting	Noise-Reducing Finishes	Ceiling Lifts	Nursing Floor Layout	Decentralized Supplies	Acuity Adaptable Rooms
Reduce hospital-acquired infections	**										
Reduce medical errors	*		*				*				*
Reduce patient falls	*		*		*	*		*	*		*
Reduce pain		*	*	**			*				
Improve patient's sleep	**	*	*				*				
Reduce patient stress	*	*	*	**	*		**				
Reduce depression		**	**	*	*						
Reduce length of stay		*	*	*							*
Improve patient privacy and confidentiality	**				*		*				
Improve communication with patients and families	**				*		*				
Improved social support	*				*	*					
Increase patient satisfaction	**	*	*	*	*	*	*				
Decrease staff injuries								**			*
Decrease staff stress	*	*	*	*			*				
Increase staff effectiveness	*		*				*			*	*
Increase staff satisfaction	*	*	*	*			*				

NCH Healthcare System

- **“When you connect all of the parts together it helps the care team deliver the care better and lessens the risk for the caregiver, but ultimately gets the patient home faster.”**
 - Gerald McGinnis, Director of Nurse Informatics at NCH North Naples Hospital



Printer-friendly story
Read more at naplesnews.com

Smart Room: NCH mulls new system using latest technology

By LIZ FREEMAN

Monday, March 14, 2011

NAPLES — In the not too distant future, the patient room of the future will be plugged in at the NCH Healthcare System.

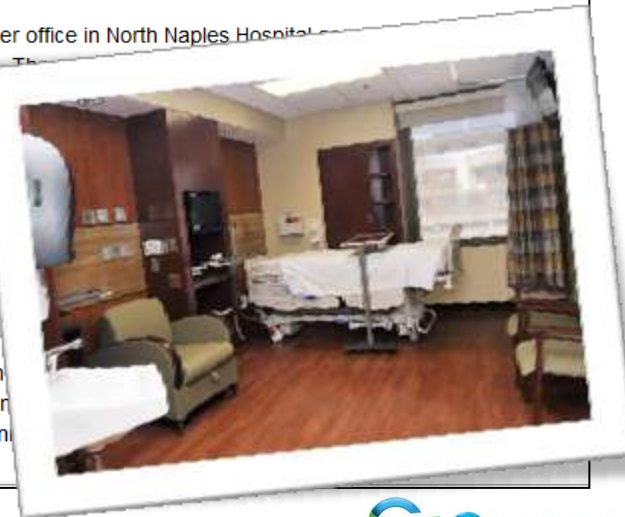
Cerner Inc., headquartered in Kansas City, Mo., has merged wireless technology and medical software to create a "smart room" for improving safety and efficiency in patient care.

NCH has converted a former office in North Naples Hospital into a visiting hospital executives. The hospital system is planning to help the hospital system nursing officer.

This summer, NCH plans to launch a new tower at North Naples and The hope is to roll out even more towers in the future.

"We've shown it to about 100 people and got a lot of interest."

Reducing medical errors in scathing Institute of Medicine deaths. The federal government safety.



Department of Defense

■ “Cerner performed workflow analyses and held kick-off sessions with clinical staff from Dewitt Army Community Hospital, Walter Reed Army Medical Center and National Naval Medical Center to present the new technology and observe on-site operations.”

— The Voice Newsletter

THE VOICE NEWSLETTER April 21, 2011

Upcoming Events

May 3
Civilian Human Resources Council Town Hall at Walter Reed Army Medical Center-Joel Auditorium 0700 and 1200

May 13
CHRC Town Hall at National Naval Medical Center - Clark Auditorium 0830 and 1200

May 24
CHRC Town Hall at WRAMC - Joel Auditorium 0700 and 1200

May 25
CHRC Town Hall at Fort Belvoir Time and Location TBD

Sept. 16
Base Reassignment and Closure deadline

Smart Suites in the National Capital Region will provide patient-centered care
By Breanna Hockenbury, strategic communications, Joint Task Force National Capital Region Medical

The new Walter Reed National Medical Center Hospital technology will provide the new National Capital Region Medical Center with Smart Suites, care and bedside electronic communication, audiovisual capability. To control the bedside. Smart ability to deliver active patient position, and when patients facilitates communication and the care team integration.

Two unique myCare Team introduces provides patient digitally. It allows patients to know when a doctor enters the room and displays that doctor's information. It also includes information about a patient's medical team, even when there is

Installing Smart Suites in the medical facilities in the NCR is part of JTF CapMed's effort to incorporate evidenced-based design principles that provide patient and family-centered care and increase patient safety.”

Christine Bruzek-Kohler, Ph.D., executive director, health care operations, JTF CapMed

Continued on page 4

WHERE THE NATION HEALS ITS HEROES™

Left: Single patient room in Building 10 at National Naval Medical Center Bethesda, Md. (Photo by the Joint Task Force National Capital Region Medical)

Right: Smart Suites will provide an optimal patient experience with comprehensive communication, education and entertainment strategy for inpatients during their stay.

National Capital Region Medical

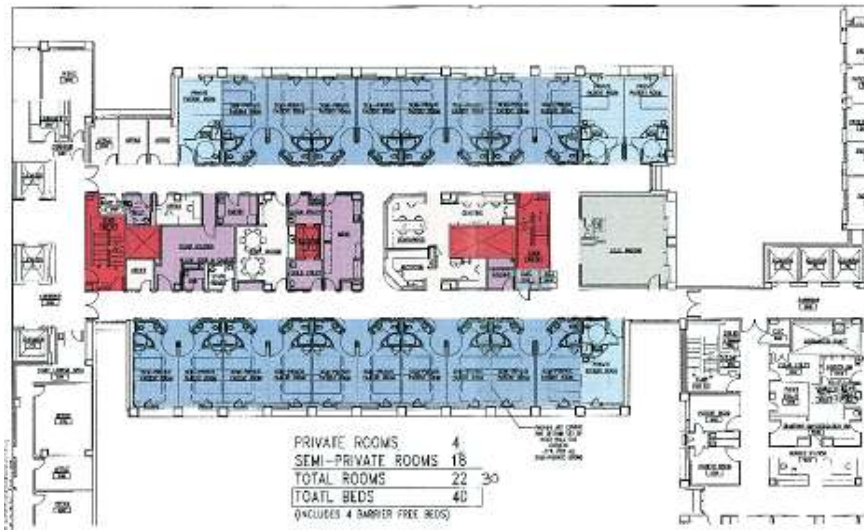
myTV
myCare Team
myChart
myHealth
myEducation
myEntertainment
myEntertainment

National Capital Region Medical

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Rethink and Refit.... *Reward*

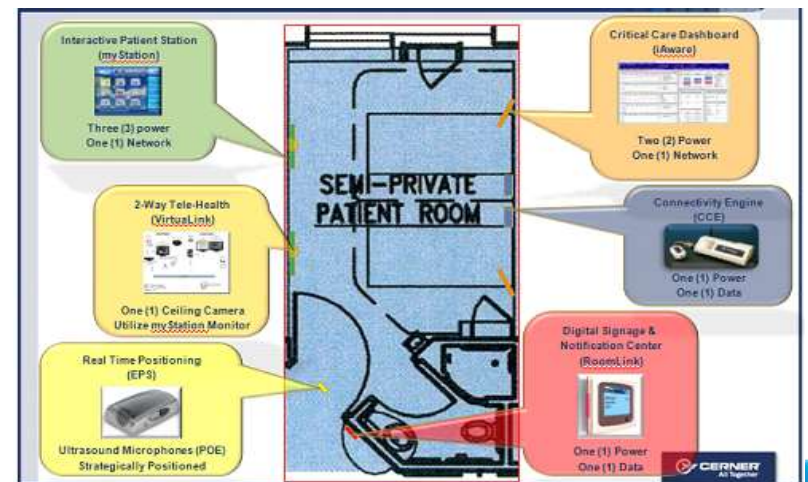
Facility-wide equipped infrastructure



Complex campus coordinated efforts



Flexibility through modularity





THANK YOU!